

Visualizing Crowdsourced Urban Landscapes

The impact of social networking in participatory practices

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Introduction

Many new questions arise with regard to web2.0-based technologies, which are more and more frequently used by non-experts to generate and share geographic information, new collective urban visions, and place-based knowledge. The urban landscapes we interact with every day are also filled with shared form of data aggregated via the web. Through the channels carried by the new ICT and the web 2.0 social networking (blogs, micro blogs, Twitter, Facebook, mobile geo referenced application, etc..) are shared every day hundreds of thousands of local information of different nature: it is a mass of raw data which should be observed and analyzed carefully.

This paper discusses the role of participatory planning and mapping practices in the context of Milan metropolitan region. In particular we take into account the collaborative use of new technologies (such as the use of place-based microblogging) within the processes of social sharing of urban. This allows to point out several critical issues related to mechanisms of collective intelligence and to define how *citizen science* can be correctly related to the usual processes of participation and elaboration of visual final results.

Making the participatory process visible

Visualization is certainly a very powerful tool to improve community's discussion on urban landscape scenarios: is it possible to relate the new forms of micro-participation via web with alternative visualization techniques as key to promoting broad-based community involvement? Another important issue raised by this research is: which *alternative knowledge* [1] of the urban landscape is useful for processes of policy making that can be considered as central for the inhabitant's role, expectations, know-how and memories?

The involvement of people, defining quality and main characteristics of an urban landscape requires also the use of innovative and diversified tools, focusing on those who allow wide interaction and, first of all, assessment of perceived quality of a shared landscape. Firstly it is useful to define a hybrid method based on a democratic interactive process where different groups of participants come to

understand each other's perspective: this may lead to the construction of a landscape assessment of an area carried out by the people who lives there.

The method applied in this case study, the first urban eco-museum in Lombardia: the Ecomuseo Urbano Metropolitano Milano Nord (EUMM), was designed to support collaborative efforts, to increase public participation in problem analysis and decision-making and to evaluate possible interactions between non-organized forms of collective collaboration and institutional processes of transformation of the urban landscape. Participation meetings, held by EUMM, during 2008-2009, had some specific purposes:

- reconstruct the recent history of urban and industrial changes that have altered the perceived and experienced urban landscape
- map the sites of social life
- trace the relationship between built space and urban parks
- create a "community map" open to further development through the use of e-participation tools
- define the elements of quality of the urban landscape in relation to the results of public participation
- propose methods of connection between the results of public participation and local policy makers.

Actors, networks, tools

To reach most of the goals set was essential to calibrate the main methods used to manage public participation through extensive use of views, maps, tools capable of making visible points of interest identified by participants, facilitating forms of sharing, management and analysis of local knowledge expressed by the populations. Specific attention was given to the problems of perception and definition of shared landscape quality. In this context, the role of expert knowledge in the analysis and definition of the *social perception of the urban landscape* is now changing rapidly and radically.

These recent developments of the Web –namely the open-source GIS, the collective use of GPS tracking, and the social networks – force the technicians to rely on new skills: from the cultural mediation of landscape values to the *ad hoc* interpretation of the new geographical information [2]. Furthermore, local and non-technical knowledge starts to play an increasingly important role in expanding the scope of the definitions of the urban landscapes. This role is even more evident in the case of participatory actions within the context of great urban areas.

This case study show that great attention should be paid to:

- not underestimate the quantity and quality of social interactions that influence the perception of space
- take into account a broader social need of new representations of the urban landscape
- use constructively the tendency of citizens to share knowledge, information and opinions about their urban landscapes through multiple direct and indirect channels

- use powerful and shared images to represent the transformation of an urban environment.

In this way the visualization process is not only a way to define consolidated imaginary but also a social practice of the creation of urban space, addressing questions related to visualization means also discuss the relationship between space and perception: mental models are possible illustration for the process of spatial perception, they are extremely useful for understanding similarities and differences between real places and the social perceptions. A major challenge to study issues related to the stratification of local knowledge is certainly on the role to be attributed to scientific knowledge in relation to diffuse, not systematized social form of place-based knowledge. The process of building awareness of the shared landscape values must also assume responsibility to broaden stakeholders and facilitate the return on police and urban planning, also for this reason, inside EUMM participatory practices, it was decided to develop, with the direct participation of citizens and the physical mapping, innovative tools for e-participation as a Geoblog and Participatory GIS.

The Geoblog makes use of the social innovations of Web 2.0 to combine visual data with geospatial data and to enable the general public to contribute their local knowledge through effective communication tools; Geoblog is a communication and visualization platform on the everyday landscape which brings together scientific information with feedback, sharing of local and historical information, observations of ordinary people.

One important challenge, from a technological and cross-media point of view, is to relate participatory meetings with the of on-line mapping community, avoiding the excessive, ineffective, proliferation of the issues discussed, and, on the other side, encourage the use of appropriate technologies for more fast sharing of results with the public administration and decision makers. It deals with using an integrated approach. First: the great size of spatial and social interrelations has to be illustrated to foster collective understanding and insight. Secondly: the abstract concepts of perceived and shared urban landscape has to be translated in to concrete and tangible images, maps, scenarios, proposals for preservation and change.

Work on the interaction between urban structured forms of knowledge and collective unorganized knowledge means addressing a broad range of new issues:

- how to adapt our tools of analysis to fully understand an urban landscape that no longer made up of sums of objects, but by complex relations between subjects and spaces?
- how not to underestimate the creative use of new technology and its rapid adaptation to shared forms of participation?
- is it possible to use visualization to add cognitive and social benefit to informal processes of local knowledge generations?
- what are the best ways to combine traditional quantitative analytical method with the need to 'make visible' the new ways of perceiving and experiencing the urban landscape?

Acknowledgments

Ecomuseo Urbano Metropolitano Milano Nord (EUMM), www.eumm-nord.it

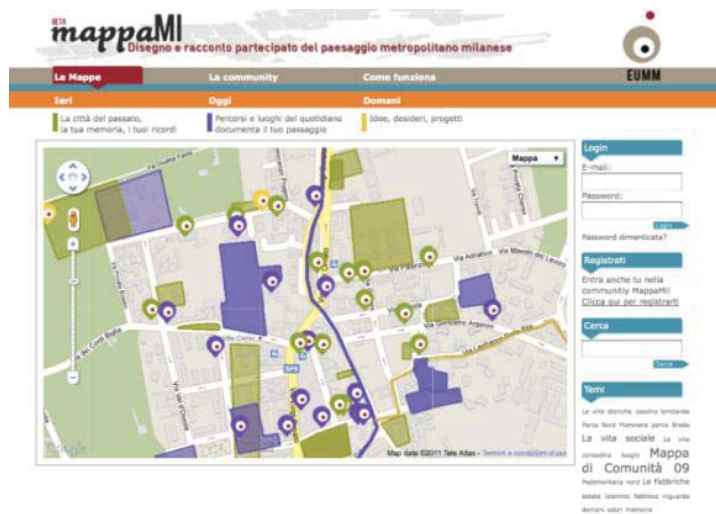


Fig 1. Front page of Mappa-Mi (www.mappa-mi.it), a web-based participatory mapping project in north Milan by EUMM and DiAP / Politecnico di Milano

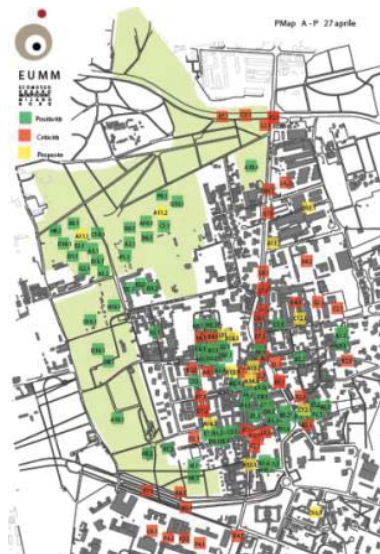


Fig 2. The visualization of a SWOT analysis of urban landscape in a neighborhood of Milan, carried out by EUMM and DiAP / Politecnico di Milano with the participation of citizens. The items displayed are: positive in green, negative ones in red and yellow the proposals.

References

- [1] Healey P. (2007) Urban Complexity and Spatial Strategies, Routledge, London
- [2] Gordon E., de Souza e Silva A. (2011), Net Locality, Wiley-Blackwell, Oxford